**IT Applications, Unit 4**

**Ch 4, Organisations and information needs, p 129-136**

**WHAT IS AN INFORMATION SYSTEM?**

1. **Define an information system.**

An information system is a group of components that work together. An information system could be processing and assembling a hamburger or launching a space shuttle.

1. **List the 4 components of an information system.**

* Equipment (Software and Hardware)
* Data (to be manipulated)
* Personnel (to oversee the running of the system)
* Procedures (to ensure data is manipulated in a n efficient manner.

**Components of an information system, p 131**

**EQUIPMENT:**

**SOFTWARE:**

**Elaborate under each of the following four main types of software.**

1. **Operation or system software**

Operation software controls the operations of the computer hardware. If the computer system has no operation software then it cannot run applications. The functions of operation software include starting up the computer, executing and storing application programs, storing and retrieving files and sending information to output devices.

The operations system also configures devices. To communicate with peripheral devices such as a printer, the system relies on device drivers that instruct it how to interact with the hardware.

Examples of operation software are windows, Mac and Novell.

1. **Application software**

Application software provides support to computer users. These programs are generally created by programmers and sold in large quantities to customers. Examples of application software include word processing programs (Word), spreadsheets (Excel) and databases (filemaker pro and access). Application software can be individually created for specific needs.

1. **Utility software**

Utility software performs a specific task. Most operating systems included utility programs that perform tasks such as diagnosing problems and scanning disks. Other examples of utility programs include programs that create backups or convert data into different formats and virus protection programs such as Norton and McAffe VET.

1. **Programming software**

To program software you need to be able to use and know a programming language in order to communicate the instructions. A programming language is a set of words or codes that allows a programmer to communicate instructions to a computer. Some examples of programming languages include Visual Basic, Hypertalk, HTML (Hyper text mark up language), PHP and Java.

**HARDWARE:**

1. **List the 5 core components of a pc.**

* System unit
* Hard disk
* Monitor
* Keyboard
* Mouse

**DATA:**

1. **Describe the nature of data.**

When data is entered into the computer it is raw and unorganised. It could be entered as numbers, letters, words, images or sounds. For data to become meaningful it has to be processed or manipulated.

**PERSONNEL:**

1. **Who are the personnel in organisations?**

The personnel are also known as users. Users is a broad term that describes employees, customers, sellers of goods and other people who use information systems.

**PROCEDURES:**

1. **What is the purpose of procedures?**

Procedures can be defined as series of steps that are followed so that tasks are preformed uniformly and consistently. Procedures describe the tasks that users, ICT professionals, and managers perform in relation to the information system. Some of these procedures include backing up the data, adding new data. Often there are manuals and reference materials to instruct the personnel.

**Information characteristics in organisations, p 133**

**INFORMATION FLOW**

1. **What is meant by information flow?**

For the efficient operation of any business information has to be able to flow between the four hierarchy levels within the company.

1. **List the four hierarchy levels within a large organisation and the people who are at each of these levels.**

* Senior management ( Manager, CEO)
* Middle management (Directors manager)
* Operational management (Supervisor, team leader)
* Operational workers (computer operators, receptionist, factory workers, sales reps)

**Structure of information, p 134**

**Describe the following categories or structures of information and which hierarchy level uses the information.**

1. **Detail reports**

Detail reports involve the communication of all the assembled records. One line of the detailed report is assigned to a record. Operational workers use this type of information.

1. **Summary reports**

Summary reports are a brief version of a detailed report that use totals and averages rather than reporting individual items. Summary reports are often used by middle and senior management to gain understanding of operations at the operational level.

1. **Aggregate reports**

Aggregate reports are similar to detailed reports, but the only relate to one particular factor or subject. Middle management would use this report to; for example, find the sales figures for one particular product.

1. **Sample reports**

Sampled information is a section of the detailed information that provides senior management with an idea of the overall situation. This means that the managers do not need to waste time reading irrelevant information.

1. **Exception reports.**

An exception report identifies the data that show variation from the set or from the target results. This report is used by managers to help identify situations that require corrective action.

**Decision-making in organisations, p 135**

**Under each of the following levels of management describe the characteristics of decision making made, strategic, tactical, operational and day-to-day decisions.**

1. **Decision-making by senior management**

The decisions made by senior management are strategic and can involve complicated problems related to the long term goals of the organisation. They take a long time to finalise and it often involves extensive research, for example market analysis.

1. **Decision-making by middle management**

Decisions made by the middle management are tactical and they solve problems that affect the running of the organisation. The managers of the organisation are responsible for the tactical decisions in their department, for example the finance department. These tactical decisions reflect the strategic decisions of the senior managers.

1. **Decision-making by operational management**

Operational management are the supervisors of the workers and they deal with operational decisions. This may include customer complaints, ordering stock and staff management. These decisions are on the spot and require quick thinking and do not have a long lasting effect on the company. The operational decisions must reflect the tactical decisions of the middle managers.

1. **Decision-making by operational workers**

The workers at the operational level also make day to day decisions that help the efficient running of the business. The workers are the first point of contact with the customers and they make decisions such as who is next in the queue, customer questions, and what is needed to complete a specific task.